

GenCore version 5.1.9  
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OM protein - protein search, using sw model

Run on: July 28, 2006, 12:42:38 ; Search time 0.001 Seconds  
(without alignments)  
259.650 Million cell updates/sec

Title: US-10-006-922A-12-COPY  
Perfect score: 1214  
Sequence: 1 MRSSKNVIKEFMRFKVRMEG.....EDYTIVEQYERTEGRHHLFL 225

Scoring table: BLOSUM62  
Gapop 10.0 , Gapext 0.5

Searched: 5 seqs, 1154 residues

Total number of hits satisfying chosen parameters: 5

Minimum DB seq length: 0  
Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%  
Maximum Match 100%  
Listing first 45 summaries

Database : new.pep:\*

Pred. No. is the number of results predicted by chance to have a  
score greater than or equal to the score of the result being printed,  
and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	% Query		DB	ID	Description
		Match	Length			
1	559.5	46.1	232	1	US-10-006-922A-42-COPY	Sequence 42, Appl
2	556.5	45.8	232	1	US-10-006-922A-14-COPY	Sequence 14, Appl
3	494	40.7	229	1	US-10-006-922A-28-COPY	Sequence 28, Appl
4	478.5	39.4	231	1	US-10-006-922A-6-COPY	Sequence 6, Appli
5	475	39.1	230	1	US-10-006-922A-8-COPY	Sequence 8, Appli

ALIGNMENTS

RESULT 1  
US-10-006-922A-42-COPY  
; Sequence 42, Application US/10006922A  
; GENERAL INFORMATION:  
; APPLICANT: Lukyanov, Sergey A  
; APPLICANT: Fradkov, Arcady F.  
; APPLICANT: Labas, Yulii A.

; APPLICANT: Matz, Mikhail V.  
 ; APPLICANT: Terskikh, Alexey  
 ; TITLE OF INVENTION: Novel Chromophores/Fluorophores and  
 ; TITLE OF INVENTION: Methods for Using the Same  
 ; FILE REFERENCE: CLON-035CIP  
 ; CURRENT APPLICATION NUMBER: US/10/006,922A  
 ; CURRENT FILING DATE: 2002-05-07  
 ; PRIOR APPLICATION NUMBER: 09/120,330  
 ; PRIOR FILING DATE: 1998-12-11  
 ; PRIOR APPLICATION NUMBER: 09/457,898  
 ; PRIOR FILING DATE: 1999-12-09  
 ; PRIOR APPLICATION NUMBER: 09/458,144  
 ; PRIOR FILING DATE: 1999-12-09  
 ; PRIOR APPLICATION NUMBER: 09/458,477  
 ; PRIOR FILING DATE: 1999-12-09  
 ; PRIOR APPLICATION NUMBER: 09/457,556  
 ; PRIOR FILING DATE: 1999-12-09  
 ; PRIOR APPLICATION NUMBER: 09/444,338  
 ; PRIOR FILING DATE: 1999-11-19  
 ; NUMBER OF SEQ ID NOS: 46  
 ; SOFTWARE: FastSEQ for Windows Version 4.0  
 ; SEQ ID NO 42  
 ; LENGTH: 232  
 ; TYPE: PRT  
 ; ORGANISM: Anemonia sulcata  
 US-10-006-922A-42-COPY

Query Match 46.1%; Score 559.5; DB 1; Length 232;  
 Best Local Similarity 48.4%; Pred. No. 0;  
 Matches 105; Conservative 37; Mismatches 72; Indels 3; Gaps 1;

Qy 8 IKEFMRFKVRMEGTVNGHEFEIEGEGEGRPYEGHNTVKLKVTKGGPLPFAWDILSPQFQY 67  
 :|: | || :||||||| |: |:||| |:|| :||:| :|||||||: ||| |  
 Db 5 LKKTMPFKTTIEGTVNGHYFKCTGKGEGNPFEGTQEMKIEVIEGGPLPFAFHILSTSCMY 64  
 Qy 68 GSKVYVKHPADIPDYKKLSFPEGFKWERVMNFEDGGVVTVTQDSSLQDGCIFYKVKFIGV 127  
 ||| :|: : |||| | ||||| ||| :|||| :| ||:| | :||| :|  
 Db 65 GSKAFIKYVSGIPDYFKQSFPEGFTWERTTTTYEDGGFLTAHQDTSLDGDCLVYKVKILGN 124  
 Qy 128 NFPDGPVMQKKTMGWEASTERLYPRDGV LKGEIHKALKLKDGGHYLVEFKSIYMAKKP- 186  
 |||:||||| | || ||| :| |||:|: ||| | | :| :|||  
 Db 125 NFPADGPVMQNKAGRWEPESTEIVYEVDGVLRGQSLMALKCPGGRHLTCHLHTTYRSKKPA 184  
 Qy 187 --VQLPGYYYVDSKLDITSHNEDYTIVEQYERTEGRH 221  
 :||:|:|: | :||:| | :||| ||:  
 Db 185 SALKMPGFHFEDHRIEIMEEVEKGKCYKQYEAAGVGRY 221

## RESULT 2

US-10-006-922A-14-COPY  
 ; Sequence 14, Application US/10006922A  
 ; GENERAL INFORMATION:  
 ; APPLICANT: Lukyanov, Sergey A  
 ; APPLICANT: Fradkov, Arcady F.  
 ; APPLICANT: Labas, Yulii A.  
 ; APPLICANT: Matz, Mikhail V.  
 ; APPLICANT: Terskikh, Alexey

```

; TITLE OF INVENTION: Novel Chromophores/Fluorophores and
; TITLE OF INVENTION: Methods for Using the Same
; FILE REFERENCE: CLON-035CIP
; CURRENT APPLICATION NUMBER: US/10/006,922A
; CURRENT FILING DATE: 2002-05-07
; PRIOR APPLICATION NUMBER: 09/120,330
; PRIOR FILING DATE: 1998-12-11
; PRIOR APPLICATION NUMBER: 09/457,898
; PRIOR FILING DATE: 1999-12-09
; PRIOR APPLICATION NUMBER: 09/458,144
; PRIOR FILING DATE: 1999-12-09
; PRIOR APPLICATION NUMBER: 09/458,477
; PRIOR FILING DATE: 1999-12-09
; PRIOR APPLICATION NUMBER: 09/457,556
; PRIOR FILING DATE: 1999-12-09
; PRIOR APPLICATION NUMBER: 09/444,338
; PRIOR FILING DATE: 1999-11-19
; NUMBER OF SEQ ID NOS: 46
; SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 14
; LENGTH: 232
; TYPE: PRT
; ORGANISM: Anemonia sulcata
US-10-006-922A-14-COPY

```

```

Query Match          45.8%; Score 556.5; DB 1; Length 232;
Best Local Similarity 47.9%; Pred. No. 0;
Matches 104; Conservative 38; Mismatches 72; Indels 3; Gaps 1;

```

```

Qy      8 IKEFMRFKVRMEGTVNGHEFEIEGEGEGRPYEGHNTVKLKVTKGGPLPFAWDILSPQFQY 67
      :|:| | | | :| | | | | | | :|:| | | | :|:| | :| | | | | | | |
Db      5 LKKTMPFKTTIEGTVNGHYFKCTGKGEGNPFEGTQEMKIEVIEGGPLPFAFHILSTSCMY 64

Qy     68 GSKVYVKHPADIPDYKKLSFPEGFKWERVMNFEDGGVVTVTQDSSLQDGCFIYKVKFIGV 127
      ||| :|:| :| | | | | | | | | :| | | :| | | | | :| | | | :|
Db     65 GSKTFIKYVSGIPDYFKQSFPEGFTWERTTTYEDGGFLTAHQDTSLDGDCLVYKVKILGN 124

Qy    128 NFPSDGPMQKKTMTGWEASTERLYPRDGVKGEIHKALKLKDGGHYLVEFKSIYMAKKP- 186
      |||:| | | | | | | | | | | | | | | | | | | | | | | | | | | |
Db    125 NFPADGPMQNKAGRWEPA TEIVYEVDGVLRGQSLMALKKCPGGRHLTCHLHTTYRSKKPA 184

Qy    187 --VQLPGY YVDSKLDITSHNEDYTIVEQYERTEGRH 221
      :|:| | | | :|:| | | | :| | | | | :| | | | |
Db    185 AALKMPGFHFEDHRIEIMEEVEKGKCYQYEA AVGRY 221

```

### RESULT 3

US-10-006-922A-28-COPY

```

; Sequence 28, Application US/10006922A
; GENERAL INFORMATION:
; APPLICANT: Lukyanov, Sergey A
; APPLICANT: Fradkov, Arcady F.
; APPLICANT: Labas, Yulii A.
; APPLICANT: Matz, Mikhail V.
; APPLICANT: Terskikh, Alexey
; TITLE OF INVENTION: Novel Chromophores/Fluorophores and
; TITLE OF INVENTION: Methods for Using the Same

```

```

; FILE REFERENCE: CLON-035CIP
; CURRENT APPLICATION NUMBER: US/10/006,922A
; CURRENT FILING DATE: 2002-05-07
; PRIOR APPLICATION NUMBER: 09/120,330
; PRIOR FILING DATE: 1998-12-11
; PRIOR APPLICATION NUMBER: 09/457,898
; PRIOR FILING DATE: 1999-12-09
; PRIOR APPLICATION NUMBER: 09/458,144
; PRIOR FILING DATE: 1999-12-09
; PRIOR APPLICATION NUMBER: 09/458,477
; PRIOR FILING DATE: 1999-12-09
; PRIOR APPLICATION NUMBER: 09/457,556
; PRIOR FILING DATE: 1999-12-09
; PRIOR APPLICATION NUMBER: 09/444,338
; PRIOR FILING DATE: 1999-11-19
; NUMBER OF SEQ ID NOS: 46
; SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 28
; LENGTH: 229
; TYPE: PRT
; ORGANISM: Anemonia majano
US-10-006-922A-28-COPY

```

```

Query Match          40.7%; Score 494; DB 1; Length 229;
Best Local Similarity 45.8%; Pred. No. 0;
Matches 92; Conservative 37; Mismatches 70; Indels 2; Gaps 1;

```

```

Qy      1 MRSSKNVIKEFMRFKVRMEGTVNGHEFEIEGEGEGRPYEGHNTVKLKVT--KGGPLPFAW 58
        | | | | | : | : | | | | | : | | | | | | | | | | | | | | | : |
Db      1 MALSNEFIGDDMKMTYHMDGCVNGHYFTVKGEGSGKPYEGTQTSTFKVTMANGGPLAFSF 60

Qy     59 DILSPQFQYGSKVYVKHPADIPDYKKLSFPEGFKWERVMNFEDGGVVTVTQDSSLQDGCF 118
        | | | | | | | : : : | : | | | | | : | | | | | | : : | |
Db     61 DILSTVFMYGNRCFTAYPTSMPDYFKQAFPDGMSYERTFTYEDGGVATASWEISLKGNCF 120

Qy    119 IYKVKFIGVNFPSDGPVMQKKTMGWEASTERLYPRDGVLKGEIHKALKLKDGGHYLVEFK 178
        : | | | | | : | | | | | | | | | | : | : : | | : | | : |
Db    121 EHKSTFHGVNFPADGPVMAKKTGWDPSFEKMTVCDGILKGDVTAFLMLQGGGNYRCQFH 180

Qy    179 SIYMAKKPVQLPGYYYVDSKL 199
        : | | | | : | : | : :
Db    181 TSYKTKKPVTMPPNHVVEHRI 201

```

#### RESULT 4

US-10-006-922A-6-COPY

```

; Sequence 6, Application US/10006922A
; GENERAL INFORMATION:
; APPLICANT: Lukyanov, Sergey A
; APPLICANT: Fradkov, Arcady F.
; APPLICANT: Labas, Yulii A.
; APPLICANT: Matz, Mikhail V.
; APPLICANT: Terskikh, Alexey
; TITLE OF INVENTION: Novel Chromophores/Fluorophores and
; TITLE OF INVENTION: Methods for Using the Same
; FILE REFERENCE: CLON-035CIP
; CURRENT APPLICATION NUMBER: US/10/006,922A

```

```

; CURRENT FILING DATE: 2002-05-07
; PRIOR APPLICATION NUMBER: 09/120,330
; PRIOR FILING DATE: 1998-12-11
; PRIOR APPLICATION NUMBER: 09/457,898
; PRIOR FILING DATE: 1999-12-09
; PRIOR APPLICATION NUMBER: 09/458,144
; PRIOR FILING DATE: 1999-12-09
; PRIOR APPLICATION NUMBER: 09/458,477
; PRIOR FILING DATE: 1999-12-09
; PRIOR APPLICATION NUMBER: 09/457,556
; PRIOR FILING DATE: 1999-12-09
; PRIOR APPLICATION NUMBER: 09/444,338
; PRIOR FILING DATE: 1999-11-19
; NUMBER OF SEQ ID NOS: 46
; SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 6
; LENGTH: 231
; TYPE: PRT
; ORGANISM: Zoanthus species
US-10-006-922A-6-COPY

```

```

Query Match          39.4%; Score 478.5; DB 1; Length 231;
Best Local Similarity 45.6%; Pred. No. 0;
Matches 93; Conservative 38; Mismatches 68; Indels 5; Gaps 3;

```

```

Qy      1 MRSSKNVIKEFMRFKVRMEGTVNGHEFEIEGEGEGRPYEGHNTVKLKVTKGGPLPFAWDI 60
      | ||: : : | | |||| |::| | || | |::| : | | : ||||| ||
Db      1 MAQSKHGLTKEMTMKYRMEGCDGHKFVITGEGIGYPFKGKQAINLCVVEGGPLPFAEDI 60

Qy     61 LSPQFQYGSKVYVKHPADIPDYKKLSFPEGFKWERVMNFEDGGVVTVTQD--SSLQDGCF 118
      || | ||::: : : | | || | | | | : | : | |||| | | | : : : |
Db     61 LSAAFNYGNRVFTEYPQDIADYFKNSCPAGYTWDRSFLFEDGAVCICNADITVSVEENCM 120

Qy    119 IYKVKFIGVNFPSDGPVMQKKTMGWEASTERL--YPRDGVLKGEIHKALKLKDGGHYLVE 176
      : : || |||||: |||||: | | || | |:: | : | : ||||: : | |||| | :
Db    121 YHESKFYGVNFPADGPMKKMTDNWEPSCCKIIPVVKQGIKGDVSMYLLLLKDGGRRLRCQ 180

Qy    177 FKSIYMAKK-PVQLPGYYYVDSKL 199
      | : | || | : | : : : ||
Db    181 FDTVYKAKSVPRKMPDWHFIQHKL 204

```

# RESULT 5

```

US-10-006-922A-8-COPY
; Sequence 8, Application US/10006922A
; GENERAL INFORMATION:
; APPLICANT: Lukyanov, Sergey A
; APPLICANT: Fradkov, Arcady F.
; APPLICANT: Labas, Yulii A.
; APPLICANT: Matz, Mikhail V.
; APPLICANT: Terskikh, Alexey
; TITLE OF INVENTION: Novel Chromophores/Fluorophores and
; TITLE OF INVENTION: Methods for Using the Same
; FILE REFERENCE: CLON-035CIP
; CURRENT APPLICATION NUMBER: US/10/006,922A
; CURRENT FILING DATE: 2002-05-07
; PRIOR APPLICATION NUMBER: 09/120,330

```

```
; PRIOR FILING DATE: 1998-12-11
; PRIOR APPLICATION NUMBER: 09/457,898
; PRIOR FILING DATE: 1999-12-09
; PRIOR APPLICATION NUMBER: 09/458,144
; PRIOR FILING DATE: 1999-12-09
; PRIOR APPLICATION NUMBER: 09/458,477
; PRIOR FILING DATE: 1999-12-09
; PRIOR APPLICATION NUMBER: 09/457,556
; PRIOR FILING DATE: 1999-12-09
; PRIOR APPLICATION NUMBER: 09/444,338
; PRIOR FILING DATE: 1999-11-19
; NUMBER OF SEQ ID NOS: 46
; SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 8
; LENGTH: 230
; TYPE: PRT
; ORGANISM: Zoanthus species
US-10-006-922A-8-COPY
```

```
Query Match          39.1%; Score 475; DB 1; Length 230;
Best Local Similarity 46.1%; Pred. No. 0;
Matches 94; Conservative 38; Mismatches 66; Indels 6; Gaps 4;
```

```
Qy      1 MRSSKNVIKEFMRFKVRMEGTVNGHEFEIEGEGEGRPYEGHNTVCLKVTKGGPLPFAWDI 60
      |  ||: || | | ||| |||:| | ||| | |:| | | :||| ||: ||
Db      1 MAHSKHGLKEEMTMKYHMEGCVNGHKFVITGEGIGYPFKGKQTINLCVIEGGPLPFSEDI 60

Qy     61 LSPQFQYGSKVYVKHPADIPDYKKLSFPEGFKWERVMNFEDGGVVTVTQD--SSLQDGC 118
      || | |:| | ::: ::| || || | | | |: | : |||| | | | :|:| |
Db     61 LSAGFKYGDRIFTEYPQDIVDYFKNSCPAGYTWGSFL-FEDGAVCICNVDITVSVKENCI 119

Qy    119 IYKVKFIGVNFPSDGPVMQKKTMCWEASTERL--YPRDGVCLKGEIHKALKLKDGGHYLVE 176
      :| | |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:|
Db    120 YHKSIFNGMNFADGPVMKKMTTNWEASCEKIMPVPKQGILKGDVSMYLLLLKDGGRYRCQ 179

Qy    177 FKSIYMAKK-PVQLPGYYYVDSKL 199
      | ::| || | ::| ::| ::| ::|
Db    180 FDTVYKAKSVPSKMPewHFIQHL 203
```

```
Search completed: July 28, 2006, 12:42:38
Job time : 0.001 secs
```

Connecting via Winsock to STN

Welcome to STN International! Enter x:x

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and display fields  
NEWS 12 JUN 28 Price changes in full-text patent databases EPFULL and PCTFULL  
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NEWS 14 JUL 14 FSTA enhanced with Japanese patents  
NEWS 15 JUL 19 Coverage of Research Disclosure reinstated in DWPI  
  
NEWS EXPRESS JUNE 30 CURRENT WINDOWS VERSION IS V8.01b, CURRENT  
MACINTOSH VERSION IS V6.0c(ENG) AND V6.0Jc(JP),  
AND CURRENT DISCOVER FILE IS DATED 26 JUNE 2006.  
  
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FILE 'HOME' ENTERED AT 16:49:07 ON 28 JUL 2006

=> file medline, biosis, wpids, hcaplus, uspatful,		
COST IN U.S. DOLLARS	SINCE FILE	TOTAL
	ENTRY	SESSION
FULL ESTIMATED COST	0.21	0.21

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=> s cnidarian species  
L1 80 CNIDARIAN SPECIES

=> s anthozoan and non-pennatulacean  
L2 8 ANTHOZOAN AND NON-PENNATULACEAN

=> sl1 and l2  
SL1 IS NOT A RECOGNIZED COMMAND  
The previous command name entered was not recognized by the system.  
For a list of commands available to you in the current file, enter  
"HELP COMMANDS" at an arrow prompt (=>)..

=> s l1 and l2  
L3 5 L1 AND L2

=> d l3 ti abs ibib tot

L3 ANSWER 1 OF 5 HCAPLUS COPYRIGHT 2006 ACS on STN  
TI cDNAs encoding chromo/fluoroproteins from non-bioluminescent  
Cnidarian species or non-Pennatulacean  
(sea pen) species and their use  
AB Nucleic acid compns. encoding novel chromo/fluoroproteins and mutants  
thereof, as well as the proteins encoded the same, are provided. The  
proteins of interest are proteins that are colored and/or fluorescent,  
where this feature arises from the interaction of two or more residues of  
the protein. The subject proteins are further characterized in that they  
are either obtained from non-bioluminescent Cnidarian, e.g.,  
Anthozoan, species or are obtained from Anthozoan  
non-Pennatulacean (sea pen) species. More specifically,  
they include GFP of Heteractis crispa, Dendronephthya sp, Scolymia  
cubensis, Ricordea florida, Montastraea cavernosa, Condylactis gigantea,  
Agaricia fragilis, sequence homolog of Montrastraea annularis and RFP of  
Zoanthus sp., Ricordea florida, and Montastraea cavernosa. Also of  
interest are proteins that are substantially similar to, or mutants of,  
the above specific proteins. Also provided are fragments of the nucleic  
acids and the peptides encoded thereby, as well as antibodies to the  
subject proteins and transgenic cells and organisms. The subject protein  
and nucleic acid compns. find use in a variety of different applications.  
Finally, kits for use in such applications, e.g., that include the subject  
nucleic acid compns., are provided.

ACCESSION NUMBER: 2003:397030 HCAPLUS  
DOCUMENT NUMBER: 138:397335  
TITLE: cDNAs encoding chromo/fluoroproteins from  
non-bioluminescent Cnidarian species  
or non-Pennatulacean (sea pen)  
species and their use  
INVENTOR(S): Labas, Yulii Aleksandrovich; Gurskaya, Nadezda  
Georgievna; Yanushevich, Yuriy; Fradkov, Arcady



Fedorovich; Lukyanov, Konstantin; Lukyanov, Sergey;  
 Matz, Mikhail Vladimirovich  
 PATENT ASSIGNEE(S): Clontech Laboratories, Inc., USA  
 SOURCE: PCT Int. Appl., 88 pp.  
 CODEN: PIXXD2  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 2  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2003042401	A2	20030522	WO 2002-US36499	20021112
WO 2003042401	A3	20031120		
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG CA 2454031 AA 20030522 CA 2002-2454031 20021112 EP 1444245 A2 20040811 EP 2002-797104 20021112 R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, SK JP 2005509420 T2 20050414 JP 2003-544215 20021112 US 2005032085 A1 20050210 US 2004-757356 20040113 PRIORITY APPLN. INFO.: US 2001-332980P P 20011113 WO 2002-US36499 W 20021112				

L3 ANSWER 2 OF 5 HCAPLUS COPYRIGHT 2006 ACS on STN  
 TI cDNA and protein sequences of novel chromo/fluoroproteins from  
 non-bioluminescent Cnidarian species or are obtained  
 from non-Pennatulacean (sea pen) species and methods  
 for using the same  
 AB Nucleic acid compns. encoding novel chromo/fluoroproteins and mutants  
 thereof, as well as the proteins encoded by the same, are provided. The  
 subject proteins of interest are proteins that are colored and/or  
 fluorescent, where this feature arises from the interaction of two or more  
 residues of the protein. The subject proteins are further characterized  
 in that they are either obtained from non-bioluminescent Cnidarian, e.g.,  
 Anthozoan, species or are obtained from non-  
 Pennatulacean (sea pen) species. Specific proteins of interest  
 include proteins obtained from the following specific Anthozoan  
 species: Anemonia majano (NFP-1), Clavularia sp. (NFP-2), Zoanthus sp.  
 (NFP-3 & NFP-4), Discosoma striata (NFP-5), Discosoma sp. "red" (NFP-6),  
 Anemonia sulcata (NFP-7), Discosoma sp "green" (NFP-8), and Discosoma sp.  
 "magenta" (NFP-9). Also of interest are proteins that are substantially  
 similar to, or mutants of, the above specific proteins. Also provided are  
 fragments of the nucleic acids and the peptides encoded thereby, as well  
 as antibodies to the subject proteins and transgenic cells and organisms.  
 The subject protein and nucleic acid compns. find use in a variety of  
 different applications. Finally, kits for use in such applications, e.g.,  
 that include the subject nucleic acid compns., are provided.

ACCESSION NUMBER: 2002:978391 HCAPLUS  
 DOCUMENT NUMBER: 138:50935  
 TITLE: cDNA and protein sequences of novel  
 chromo/fluoroproteins from non-bioluminescent  
 Cnidarian species or are obtained  
 from non-Pennatulacean (sea pen)

INVENTOR(S): species and methods for using the same  
 Lukyanov, Sergey A.; Fradkov, Arcady F.; Labas, Yulii  
 A.; Matz, Mikhail V.; Terskikh, Alexey  
 PATENT ASSIGNEE(S): Russia  
 SOURCE: U.S. Pat. Appl. Publ., 48 pp., Cont.-in-part of Appl.  
 No. PCT/US00/28477.  
 CODEN: USXXCO  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 17  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2002197676	A1	20021226	US 2001-6922	20011204
WO 2000034526	A1	20000615	WO 1999-US29405	19991210
W: JP				
RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
WO 2001027150	A2	20010419	WO 2000-US28477	20001013
WO 2001027150	A3	20011206		
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
CA 2434737	AA	20020906	CA 2002-2434737	20020220
WO 2002068459	A2	20020906	WO 2002-US5749	20020220
WO 2002068459	A3	20031127		
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZM, ZW				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
AU 2002254031	A1	20020912	AU 2002-254031	20020220
US 2003022287	A1	20030130	US 2002-81864	20020220
US 6969597	B2	20051129		
EP 1385967	A2	20040204	EP 2002-723238	20020220
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR				
JP 2004536571	T2	20041209	JP 2002-567969	20020220
US 2003092884	A1	20030515	US 2002-155809	20020524
US 2006035330	A1	20060216	US 2005-187622	20050721
AU 2006200881	A1	20060330	AU 2006-200881	20060301
PRIORITY APPLN. INFO.:				
			US 1999-418529	A2 19991014
			US 1999-418917	B2 19991015
			US 1999-418922	B2 19991015
			US 1999-444338	B2 19991119
			US 1999-444341	B2 19991119
			US 1999-457556	B2 19991209
			US 1999-457898	B2 19991209
			US 1999-458144	B2 19991209
			US 1999-458477	B2 19991209
			WO 1999-US29405	W 19991210

US 2000-211607P	P	20000614
US 2000-211609P	P	20000614
US 2000-211626P	P	20000614
US 2000-211627P	P	20000614
US 2000-211687P	P	20000614
US 2000-211766P	P	20000614
US 2000-211880P	P	20000614
US 2000-211888P	P	20000614
US 2000-212070P	P	20000614
WO 2000-US28477	A2	20001013
US 1998-210330	A	19981211
AU 2001-10867	A3	20001013
US 2001-270983P	P	20010221
US 2001-293752P	P	20010525
US 2001-329176P	P	20011011
US 2001-976673	A	20011012
US 2001-6922	A	20011204
US 2002-81864	A1	20020220
WO 2002-US5749	W	20020220

L3 ANSWER 3 OF 5 USPATFULL on STN

TI Rapidly maturing fluorescent proteins and methods for using the same  
 AB Nucleic acid compositions encoding rapidly maturing fluorescent proteins, as well as non-aggregating versions thereof (and mutants thereof) as well as the proteins encoding the same, are provided. The proteins of interest are proteins that are fluorescent, where this feature arises from the interaction of two or more residues of the protein. The subject proteins are further characterized in that, in certain embodiments, they are mutants of wild type proteins that are obtained either from non-bioluminescent Chidarian, e.g., Anthozoan, species or are obtained from Anthozoan non-Pennatulacean (sea pen) species. In certain embodiments, the subject proteins are mutants of wild type Discosoma sp. "red" fluorescent protein. Also of interest are proteins that are substantially similar to, or mutants of, the above specific proteins. Also provided are fragments of the nucleic acids and the peptides encoded thereby, as well as antibodies to the subject proteins and transgenic cells and organisms. The subject protein and nucleic acid compositions find use in a variety of different applications. Finally, kits for use in such applications, e.g., that include the subject nucleic acid compositions, are provided.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

ACCESSION NUMBER: 2005:173243 USPATFULL

TITLE: Rapidly maturing fluorescent proteins and methods for using the same

INVENTOR(S): Bevis, Brooke, Somerville, MA, UNITED STATES

Glick, Benjamin, Chicago, IL, UNITED STATES

PATENT ASSIGNEE(S): The University of Chicago, Chicago, IL, UNITED STATES (U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 2005149994	A1	20050707
APPLICATION INFO.:	US 2004-844064	A1	20040511 (10)
RELATED APPLN. INFO.:	Continuation-in-part of Ser. No. WO 2002-US40539, filed on 18 Dec 2002, PENDING		

	NUMBER	DATE
PRIORITY INFORMATION:	US 2001-341723P	20011219 (60)
DOCUMENT TYPE:	Utility	
FILE SEGMENT:	APPLICATION	

LEGAL REPRESENTATIVE: MICHAEL BEST & FRIEDRICH, LLP, ONE SOUTH PINCKNEY  
STREET, P O BOX 1806, MADISON, WI, 53701, US  
NUMBER OF CLAIMS: 20  
EXEMPLARY CLAIM: 1  
NUMBER OF DRAWINGS: 4 Drawing Page(s)  
LINE COUNT: 2338  
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L3 ANSWER 4 OF 5 USPATFULL on STN

TI Novel chromophores/fluorophores and methods for using the same  
AB Nucleic acid compositions encoding novel chromo/fluoroproteins and  
mutants thereof, as well as the proteins encoded the same, are provided.  
The proteins of interest are proteins that are colored and/or  
fluorescent, where this feature arises from the interaction of two or  
more residues of the protein. The subject proteins are further  
characterized in that they are either obtained from non-bioluminescent  
Cnidarian, e.g., Anthozoan, species or are obtained from  
Anthozoan non-Pennatulacean (sea pen)  
species. Specific proteins of interest include the following specific  
proteins: hcriGFP; dendGFP; zoanRFP; scubGFP1; scubGFP2; rfloRFP;  
rfloGFP; mcavRFP; mcavGFP; cgigGFP; afraGFP; rfloGFP2; mcavGFP2; and  
mannFP. Also of interest are proteins that are substantially similar to,  
or mutants of, the above specific proteins. Also provided are fragments  
of the nucleic acids and the peptides encoded thereby, as well as  
antibodies to the subject proteins and transgenic cells and organisms.  
The subject protein and nucleic acid compositions find use in a variety  
of different applications. Finally, kits for use in such applications,  
e.g., that include the subject nucleic acid compositions, are provided.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

ACCESSION NUMBER: 2005:37407 USPATFULL  
TITLE: Novel chromophores/fluorophores and methods for using  
the same  
INVENTOR(S): Labas, Yulii Aleksandrovich, Moscow, RUSSIAN FEDERATION  
Gurskaya, Nadezda Georgievna, Moscow, RUSSIAN  
FEDERATION  
Yanushevich, Yuriy, Moscow, RUSSIAN FEDERATION  
Fradkov, Arcady Fedorovich, Moscow, RUSSIAN FEDERATION  
Lukyanov, Konstantin, Moscow, RUSSIAN FEDERATION  
Lukyanov, Sergey, Moscow, RUSSIAN FEDERATION  
Matz, Mikhail Vladimirovich, Moscow, RUSSIAN FEDERATION

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 2005032085	A1	20050210
APPLICATION INFO.:	US 2004-757356	A1	20040113 (10)
RELATED APPLN. INFO.:	Continuation-in-part of Ser. No. WO 2002-US36499, filed on 12 Nov 2002, PENDING		

	NUMBER	DATE
PRIORITY INFORMATION:	US 2001-332980P	20011113 (60)
DOCUMENT TYPE:	Utility	
FILE SEGMENT:	APPLICATION	
LEGAL REPRESENTATIVE:	BOZICEVIC, FIELD & FRANCIS (BD BIOSCIENCES), 1900 UNIVERSITY AVENUE, SUITE 200, EAST PALO ALTO, CA, 94303	
NUMBER OF CLAIMS:	19	
EXEMPLARY CLAIM:	1	
NUMBER OF DRAWINGS:	26 Drawing Page(s)	
LINE COUNT:	2689	

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L3 ANSWER 5 OF 5 USPATFULL on STN

TI Novel chromophores/fluorophores and methods for using the same  
 AB Nucleic acid compositions encoding novel chromo/fluoroproteins and mutants thereof, as well as the proteins encoded by the same, are provided. The subject proteins of interest are proteins that are colored and/or fluorescent, where this feature arises from the interaction of two or more residues of the protein. The subject proteins are further characterized in that they are either obtained from non-bioluminescent Cnidarian, e.g., Anthozoan, species or are obtained from non-Pennatulacean (sea pen) species. Specific proteins of interest include proteins obtained from the following specific Anthozoan species: Anemonia majano (NFP-1), Clavularia sp. (NFP-2), Zoanthus sp. (NFP-3 & NFP-4), Discosoma striata (NFP-5), Discosoma sp. "red" (NFP-6), Anemonia sulcata (NFP-7), Discosoma sp. "green" (NFP-8), and Discosoma sp. "magenta" (NFP-9). Also of interest are proteins that are substantially similar to, or mutants of, the above specific proteins. Also provided are fragments of the nucleic acids and the peptides encoded thereby, as well as antibodies to the subject proteins and transgenic cells and organisms. The subject protein and nucleic acid compositions find use in a variety of different applications. Finally, kits for use in such applications, e.g., that include the subject nucleic acid compositions, are provided.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

ACCESSION NUMBER: 2002:343950 USPATFULL

TITLE: Novel chromophores/fluorophores and methods for using the same

INVENTOR(S): Lukyanov, Sergey A., Moscow, RUSSIAN FEDERATION  
 Fradkov, Arcady F., Moscow, RUSSIAN FEDERATION  
 Labas, Yulii A., Moscow, RUSSIAN FEDERATION  
 Matz, Mikhail V., Palm Cost, RUSSIAN FEDERATION  
 Terskikh, Alexey, Palo Alto, CA, UNITED STATES

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 2002197676	A1	20021226
APPLICATION INFO.:	US 2001-6922	A1	20011204 (10)
RELATED APPLN. INFO.:	Continuation-in-part of Ser. No. WO 2000-US28477, filed on 13 Oct 2000, UNKNOWN Continuation-in-part of Ser. No. US 1999-418529, filed on 14 Oct 1999, PENDING Continuation-in-part of Ser. No. US 1999-418917, filed on 15 Oct 1999, ABANDONED Continuation-in-part of Ser. No. US 1999-418922, filed on 15 Oct 1999, ABANDONED Continuation-in-part of Ser. No. US 1999-444338, filed on 19 Nov 1999, ABANDONED Continuation-in-part of Ser. No. US 1999-444341, filed on 19 Nov 1999, ABANDONED Continuation-in-part of Ser. No. US 1999-457556, filed on 9 Dec 1999, ABANDONED Continuation-in-part of Ser. No. US 1999-458477, filed on 9 Dec 1999, ABANDONED Continuation-in-part of Ser. No. US 1999-458144, filed on 9 Dec 1999, ABANDONED Continuation-in-part of Ser. No. US 1999-457898, filed on 9 Dec 1999, ABANDONED		

	NUMBER	DATE
PRIORITY INFORMATION:	WO 1999-US29405	19991210
	US 2000-211627P	20000614 (60)
	US 2000-211687P	20000614 (60)
	US 2000-211609P	20000614 (60)
	US 2000-211626P	20000614 (60)
	US 2000-211880P	20000614 (60)
	US 2000-211607P	20000614 (60)
	US 2000-211766P	20000614 (60)
	US 2000-211888P	20000614 (60)

US 2000-212070P 20000614 (60)  
DOCUMENT TYPE: Utility  
FILE SEGMENT: APPLICATION  
LEGAL REPRESENTATIVE: BOZICEVIC, FIELD & FRANCIS LLP, 200 MIDDLEFIELD RD,  
SUITE 200, MENLO PARK, CA, 94025  
NUMBER OF CLAIMS: 31  
EXEMPLARY CLAIM: 1  
NUMBER OF DRAWINGS: 19 Drawing Page(s)  
LINE COUNT: 2795  
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

=> d his

(FILE 'HOME' ENTERED AT 16:49:07 ON 28 JUL 2006)

FILE 'MEDLINE, BIOSIS, WPIDS, HCAPLUS, USPATFULL' ENTERED AT 16:49:42 ON  
28 JUL 2006

L1 80 S CNIDARIAN SPECIES  
L2 8 S ANTHOZOAN AND NON-PENNATULACEAN  
L3 5 S L1 AND L2

=> s 11 and (variants or mutation)

L4 11 L1 AND (VARIANTS OR MUTATION)

=> s 14 and fluorescent

L5 11 L4 AND FLUORESCENT

=> d 15 ti abs ibib tot

L5 ANSWER 1 OF 11 WPIDS COPYRIGHT 2006 THE THOMSON CORP on STN

TI Novel nucleic acid encoding a rapidly maturing chromo- or  
fluorescent mutant of a Cnidarian chromo- or fluorescent  
protein or its mutant, useful for applications involving chromo- or  
fluorescent proteins.

AN 2003-569236 [53] WPIDS

AB WO2003054158 A UPAB: 20030820

NOVELTY - A nucleic acid (I) that encodes a rapidly maturing chromo or  
fluorescent mutant of a Cnidarian chromo- or fluorescent  
protein or its mutant, is new.

DETAILED DESCRIPTION - INDEPENDENT CLAIMS are also included for:

- (1) a fragment (II) of (I);
- (2) a construct (III) comprising a vector and (I);
- (3) an expression cassette (IV) comprising, a transcriptional  
initiation region functional in an expression host, (I), or (II), and a  
transcriptional termination region functional in the expression host;
- (4) a cell (V), or its progeny, comprising (IV) as part of an  
extrachromosomal element or integrated into the genome of a host cell as a  
result of introduction of the expression cassette into the host cell;
- (5) a protein (VI) or its fragment encoded by (I);
- (6) an antibody (VII) binding specifically to (VI);
- (7) a transgenic cell or its progeny, or a transgenic organism  
comprising a transgene that is (I) or (II); and
- (8) a kit comprising (I) or (II).

USE - (I) is useful in applications involving nucleic acid encoding a  
chromo- or fluorescent protein. (V) is useful for producing a  
chromo and/or fluorescent protein which involves growing the  
cell, whereby the protein is expressed, and isolating the protein  
substantially free of other proteins. (VI) is useful in applications  
involving chromo- or fluorescent protein (claimed).

(I) is useful as PCR primers, hybridization probes, etc. The  
expression cassettes are useful for synthesizing (VI). The chromoproteins  
are useful as coloring agents which are capable of imparting color or

pigment to a particular composition of matter e.g. food compositions, pharmaceuticals, cosmetics, living organisms, e.g., animals and plants. The chromoproteins may also find use as labels in analyte detection assays, e.g. assays for biological analytes of interest and as selectable markers in recombinant DNA applications, e.g. the production of transgenic cells and organisms. The fluorescent proteins find use in a variety of different applications, e.g. in fluorescence resonance energy transfer (FRET) applications, as biosensors in prokaryotic and eukaryotic cells, in applications involving the automated screening of arrays of cells expressing fluorescent reporting groups by using microscopic imaging and electronic analysis, as second messenger detectors, and in fluorescence activated cell sorting applications and as in vivo marker in animals. The fluorescent proteins also find use in protease cleavage assays. The proteins can also be used in assays to determine the phospholipid composition in biological membranes and as a fluorescent timer.

Dwg.0/4

ACCESSION NUMBER: 2003-569236 [53] WPIDS  
 DOC. NO. CPI: C2003-153632  
 TITLE: Novel nucleic acid encoding a rapidly maturing chromo- or fluorescent mutant of a Cnidarian chromo- or fluorescent protein or its mutant, useful for applications involving chromo- or fluorescent proteins.  
 DERWENT CLASS: B04 D16  
 INVENTOR(S): BEVIS, B; GLICK, B  
 PATENT ASSIGNEE(S): (UYCH-N) UNIV CHICAGO  
 COUNTRY COUNT: 103  
 PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
WO 2003054158	A2	20030703	(200353)*	EN	65
RW: AT BE BG CH CY CZ DE DK EA EE ES FI FR GB GH GM GR IE IT KE LS LU MC MW MZ NL OA PT SD SE SI SK SL SZ TR TZ UG ZM ZW					
W: AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CO CR CU CZ DE DK DM DZ EC EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ OM PH PL PT RO RU SC SD SE SG SK SL TJ TM TN TR TT TZ UA UG US UZ VC VN YU ZA ZM ZW					
AU 2002357322	A1	20030709	(200428)		
EP 1456223	A2	20040915	(200460)	EN	
R: AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR IE IT LI LT LU LV MC MK NL PT RO SE SI SK TR					
US 2005149994	A1	20050707	(200547)		
JP 2006501804	W	20060119	(200606)		43

#### APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
WO 2003054158	A2	WO 2002-US40539	20021218
AU 2002357322	A1	AU 2002-357322	20021218
EP 1456223	A2	EP 2002-805620	20021218
		WO 2002-US40539	20021218
US 2005149994	A1 Provisional	US 2001-341723P	20011219
	CIP of	WO 2002-US40539	20021218
		US 2004-844064	20040511
JP 2006501804	W	WO 2002-US40539	20021218
		JP 2003-554863	20021218

#### FILING DETAILS:

PATENT NO	KIND	PATENT NO
AU 2002357322	A1 Based on	WO 2003054158
EP 1456223	A2 Based on	WO 2003054158
JP 2006501804	W Based on	WO 2003054158

PRIORITY APPLN. INFO: US 2001-341723P 20011219; US  
2004-844064 20040511

L5 ANSWER 2 OF 11 HCAPLUS COPYRIGHT 2006 ACS on STN  
 TI cDNAs encoding chromo/fluoroproteins from non-bioluminescent  
 Cnidarian species or non-Pennatulacean (sea pen) species  
 and their use  
 AB Nucleic acid compns. encoding novel chromo/fluoroproteins and mutants  
 thereof, as well as the proteins encoded the same, are provided. The  
 proteins of interest are proteins that are colored and/or  
 fluorescent, where this feature arises from the interaction of two  
 or more residues of the protein. The subject proteins are further  
 characterized in that they are either obtained from non-bioluminescent  
 Cnidarian, e.g., Anthozoan, species or are obtained from Anthozoan  
 non-Pennatulacean (sea pen) species. More specifically, they include GFP  
 of Heteractis crispa, Dendronephthya sp, Scolymia cubensis, Ricordea  
 florida, Montastraea cavernosa, Condylactis gigantea, Agaricia fragilis,  
 sequence homolog of Montrastraea annularis and RFP of Zoanthus sp.,  
 Ricordea florida, and Montastraea cavernosa. Also of interest are  
 proteins that are substantially similar to, or mutants of, the above  
 specific proteins. Also provided are fragments of the nucleic acids and  
 the peptides encoded thereby, as well as antibodies to the subject  
 proteins and transgenic cells and organisms. The subject protein and  
 nucleic acid compns. find use in a variety of different applications.  
 Finally, kits for use in such applications, e.g., that include the subject  
 nucleic acid compns., are provided.

ACCESSION NUMBER: 2003:397030 HCAPLUS  
 DOCUMENT NUMBER: 138:397335  
 TITLE: cDNAs encoding chromo/fluoroproteins from  
 non-bioluminescent Cnidarian species  
 or non-Pennatulacean (sea pen) species and their use  
 INVENTOR(S): Labas, Yulii Aleksandrovich; Gurskaya, Nadezda  
 Georgievna; Yanushevich, Yuriy; Fradkov, Arcady  
 Fedorovich; Lukyanov, Konstantin; Lukyanov, Sergey;  
 Matz, Mikhail Vladimirovich  
 PATENT ASSIGNEE(S): Clontech Laboratories, Inc., USA  
 SOURCE: PCT Int. Appl., 88 pp.  
 CODEN: PIXXD2  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 2  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2003042401	A2	20030522	WO 2002-US36499	20021112
WO 2003042401	A3	20031120		
W:	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW			
RW:	GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG			



CA 2454031	AA	20030522	CA 2002-2454031	20021112
EP 1444245	A2	20040811	EP 2002-797104	20021112
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, SK				
JP 2005509420	T2	20050414	JP 2003-544215	20021112
US 2005032085	A1	20050210	US 2004-757356	20040113
PRIORITY APPLN. INFO.:			US 2001-332980P	P 20011113
			WO 2002-US36499	W 20021112

L5 ANSWER 3 OF 11 HCAPLUS COPYRIGHT 2006 ACS on STN

TI cDNA and protein sequences of novel chromo/fluoroproteins from non-bioluminescent Cnidarian species or are obtained from non-Pennatulacean (sea pen) species and methods for using the same

AB Nucleic acid compns. encoding novel chromo/fluoroproteins and mutants thereof, as well as the proteins encoded by the same, are provided. The subject proteins of interest are proteins that are colored and/or fluorescent, where this feature arises from the interaction of two or more residues of the protein. The subject proteins are further characterized in that they are either obtained from non-bioluminescent Cnidarian, e.g., Anthozoan, species or are obtained from non-Pennatulacean (sea pen) species. Specific proteins of interest include proteins obtained from the following specific Anthozoan species: Anemonia majano (NFP-1), Clavularia sp. (NFP-2), Zoanthus sp. (NFP-3 & NFP-4), Discosoma striata (NFP-5), Discosoma sp. "red" (NFP-6), Anemonia sulcata (NFP-7), Discosoma sp "green" (NFP-8), and Discosoma sp. "magenta" (NFP-9). Also of interest are proteins that are substantially similar to, or mutants of, the above specific proteins. Also provided are fragments of the nucleic acids and the peptides encoded thereby, as well as antibodies to the subject proteins and transgenic cells and organisms. The subject protein and nucleic acid compns. find use in a variety of different applications. Finally, kits for use in such applications, e.g., that include the subject nucleic acid compns., are provided.

ACCESSION NUMBER: 2002:978391 HCAPLUS

DOCUMENT NUMBER: 138:50935

TITLE: cDNA and protein sequences of novel chromo/fluoroproteins from non-bioluminescent Cnidarian species or are obtained from non-Pennatulacean (sea pen) species and methods for using the same

INVENTOR(S): Lukyanov, Sergey A.; Fradkov, Arcady F.; Labas, Yulii A.; Matz, Mikhail V.; Terskikh, Alexey

PATENT ASSIGNEE(S): Russia

SOURCE: U.S. Pat. Appl. Publ., 48 pp., Cont.-in-part of Appl. No. PCT/US00/28477.

CODEN: USXXCO

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 17

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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US 2002197676	A1	20021226	US 2001-6922	20011204
WO 2000034526	A1	20000615	WO 1999-US29405	19991210
W: JP				
RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
WO 2001027150	A2	20010419	WO 2000-US28477	20001013
WO 2001027150	A3	20011206		
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU,				

SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN,  
YU, ZA, ZW  
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY,  
DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ,  
CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG  
CA 2434737 AA 20020906 CA 2002-2434737 20020220  
WO 2002068459 A2 20020906 WO 2002-US5749 20020220  
WO 2002068459 A3 20031127  
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN,  
CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH,  
GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR,  
LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH,  
PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ,  
UA, UG, US, UZ, VN, YU, ZA, ZM, ZW  
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY,  
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GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA,  
GN, GQ, GW, ML, MR, NE, SN, TD, TG  
AU 2002254031 A1 20020912 AU 2002-254031 20020220  
US 2003022287 A1 20030130 US 2002-81864 20020220  
US 6969597 B2 20051129  
EP 1385967 A2 20040204 EP 2002-723238 20020220  
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,  
IE, SI, LT, LV, FI, RO, MK, CY, AL, TR  
JP 2004536571 T2 20041209 JP 2002-567969 20020220  
US 2003092884 A1 20030515 US 2002-155809 20020524  
US 2006035330 A1 20060216 US 2005-187622 20050721  
AU 2006200881 A1 20060330 AU 2006-200881 20060301  
PRIORITY APPLN. INFO.:  
US 1999-418529 A2 19991014  
US 1999-418917 B2 19991015  
US 1999-418922 B2 19991015  
US 1999-444338 B2 19991119  
US 1999-444341 B2 19991119  
US 1999-457556 B2 19991209  
US 1999-457898 B2 19991209  
US 1999-458144 B2 19991209  
US 1999-458477 B2 19991209  
WO 1999-US29405 W 19991210  
US 2000-211607P P 20000614  
US 2000-211609P P 20000614  
US 2000-211626P P 20000614  
US 2000-211627P P 20000614  
US 2000-211687P P 20000614  
US 2000-211766P P 20000614  
US 2000-211880P P 20000614  
US 2000-211888P P 20000614  
US 2000-212070P P 20000614  
WO 2000-US28477 A2 20001013  
US 1998-210330 A 19981211  
AU 2001-10867 A3 20001013  
US 2001-270983P P 20010221  
US 2001-293752P P 20010525  
US 2001-329176P P 20011011  
US 2001-976673 A 20011012  
US 2001-6922 A 20011204  
US 2002-81864 A1 20020220  
WO 2002-US5749 W 20020220

L5 ANSWER 4 OF 11 USPATFULL on STN  
TI Non aggregating fluorescent proteins and methods for using the  
same  
AB Nucleic acid compositions encoding non-aggregating chromo/fluoroproteins  
and mutants thereof, as well as the proteins encoded by the same, are

provided. The proteins of interest are polypeptides that are non-aggregating colored and/or fluorescent proteins, where the non-aggregating feature arises from the modulation of residues in the N-terminus of the protein and the chromo and/or fluorescent feature arises from the interaction of two or more residues of the protein. Also provided are fragments of the subject nucleic acids and the peptides encoded thereby, as well as antibodies to the subject proteins and transgenic cells and organisms. The subject protein and nucleic acid compositions find use in a variety of different applications. Finally, kits for use in such applications, e.g., that include the subject nucleic acid compositions, are provided.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

ACCESSION NUMBER: 2006:40680 USPATFULL

TITLE: Non aggregating fluorescent proteins and methods for using the same

INVENTOR(S): Lukyanov, Sergey, Moscow, RUSSIAN FEDERATION  
Lukyanov, Konstantin, Moscow, RUSSIAN FEDERATION  
Yanushevich, Yuriy, Moscow, RUSSIAN FEDERATION  
Savitsky, Alexandr, Moscow, RUSSIAN FEDERATION  
Fradkov, Arcady, Moscow, RUSSIAN FEDERATION

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 2006035330	A1	20060216
APPLICATION INFO.:	US 2005-187622	A1	20050721 (11)
RELATED APPLN. INFO.:	Continuation of Ser. No. US 2002-81864, filed on 20 Feb 2002, GRANTED, Pat. No. US 6969597 Continuation-in-part of Ser. No. US 2001-6922, filed on 4 Dec 2001, PENDING		

	NUMBER	DATE
PRIORITY INFORMATION:	US 2001-270983P	20010221 (60)
DOCUMENT TYPE:	Utility	
FILE SEGMENT:	APPLICATION	
LEGAL REPRESENTATIVE:	BOZICEVIC, FIELD & FRANCIS LLP, 1900 UNIVERSITY AVENUE, SUITE 200, EAST PALO ALTO, CA, 94303, US	
NUMBER OF CLAIMS:	20	
EXEMPLARY CLAIM:	1	
NUMBER OF DRAWINGS:	15 Drawing Page(s)	
LINE COUNT:	2766	

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L5 ANSWER 5 OF 11 USPATFULL on STN

TI Rapidly maturing fluorescent proteins and methods for using the same

AB Nucleic acid compositions encoding rapidly maturing fluorescent proteins, as well as non-aggregating versions thereof (and mutants thereof) as well as the proteins encoding the same, are provided. The proteins of interest are proteins that are fluorescent, where this feature arises from the interaction of two or more residues of the protein. The subject proteins are further characterized in that, in certain embodiments, they are mutants of wild type proteins that are obtained either from non-bioluminescent Cnidarian, e.g., Anthozoan, species or are obtained from Anthozoan non-Pennatulacean (sea pen) species. In certain embodiments, the subject proteins are mutants of wild type Discosoma sp. "red" fluorescent protein. Also of interest are proteins that are substantially similar to, or mutants of, the above specific proteins. Also provided are fragments of the nucleic acids and the peptides encoded thereby, as well as antibodies to the subject proteins and transgenic cells and organisms. The subject protein and nucleic acid compositions find use in a variety of different applications. Finally, kits for use in such applications, e.g., that

include the subject nucleic acid compositions, are provided.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

ACCESSION NUMBER: 2005:173243 USPATFULL  
TITLE: Rapidly maturing fluorescent proteins and  
methods for using the same  
INVENTOR(S): Bevis, Brooke, Somerville, MA, UNITED STATES  
Glick, Benjamin, Chicago, IL, UNITED STATES  
PATENT ASSIGNEE(S): The University of Chicago, Chicago, IL, UNITED STATES  
(U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 2005149994	A1	20050707
APPLICATION INFO.:	US 2004-844064	A1	20040511 (10)
RELATED APPLN. INFO.:	Continuation-in-part of Ser. No. WO 2002-US40539, filed on 18 Dec 2002, PENDING		

	NUMBER	DATE
PRIORITY INFORMATION:	US 2001-341723P	20011219 (60)
DOCUMENT TYPE:	Utility	
FILE SEGMENT:	APPLICATION	
LEGAL REPRESENTATIVE:	MICHAEL BEST & FRIEDRICH, LLP, ONE SOUTH PINCKNEY STREET, P O BOX 1806, MADISON, WI, 53701, US	
NUMBER OF CLAIMS:	20	
EXEMPLARY CLAIM:	1	
NUMBER OF DRAWINGS:	4 Drawing Page(s)	
LINE COUNT:	2338	

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L5 ANSWER 6 OF 11 USPATFULL on STN

TI Novel chromophores/fluorophores and methods for using the same  
AB Nucleic acid compositions encoding novel chromo/fluoroproteins and  
mutants thereof, as well as the proteins encoded the same, are provided.  
The proteins of interest are proteins that are colored and/or  
fluorescent, where this feature arises from the interaction of  
two or more residues of the protein. The subject proteins are further  
characterized in that they are either obtained from non-bioluminescent  
Cnidarian, e.g., Anthozoan, species or are obtained from Anthozoan  
non-Pennatulacean (sea pen) species. Specific proteins of interest  
include the following specific proteins: hcriGFP; dendGFP; zoanRFP;  
scubGFP1; scubGFP2; rfloRFP; rfloGFP; mcavRFP; mcavGFP; cgigGFP;  
afraGFP; rfloGFP2; mcavGFP2; and mannFP. Also of interest are proteins  
that are substantially similar to, or mutants of, the above specific  
proteins. Also provided are fragments of the nucleic acids and the  
peptides encoded thereby, as well as antibodies to the subject proteins  
and transgenic cells and organisms. The subject protein and nucleic acid  
compositions find use in a variety of different applications. Finally,  
kits for use in such applications, e.g., that include the subject  
nucleic acid compositions, are provided.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

ACCESSION NUMBER: 2005:37407 USPATFULL  
TITLE: Novel chromophores/fluorophores and methods for using  
the same  
INVENTOR(S): Labas, Yulii Aleksandrovich, Moscow, RUSSIAN FEDERATION  
Gurskaya, Nadezda Georgievna, Moscow, RUSSIAN  
FEDERATION  
Yanushevich, Yuriy, Moscow, RUSSIAN FEDERATION  
Fradkov, Arcady Fedorovich, Moscow, RUSSIAN FEDERATION  
Lukyanov, Konstantin, Moscow, RUSSIAN FEDERATION  
Lukyanov, Sergey, Moscow, RUSSIAN FEDERATION

Matz, Mikhail Vladimirovich, Moscow, RUSSIAN FEDERATION

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 2005032085	A1	20050210
APPLICATION INFO.:	US 2004-757356	A1	20040113 (10)
RELATED APPLN. INFO.:	Continuation-in-part of Ser. No. WO 2002-US36499, filed on 12 Nov 2002, PENDING		

	NUMBER	DATE
PRIORITY INFORMATION:	US 2001-332980P	20011113 (60)
DOCUMENT TYPE:	Utility	
FILE SEGMENT:	APPLICATION	
LEGAL REPRESENTATIVE:	BOZICEVIC, FIELD & FRANCIS (BD BIOSCIENCES), 1900 UNIVERSITY AVENUE, SUITE 200, EAST PALO ALTO, CA, 94303	
NUMBER OF CLAIMS:	19	
EXEMPLARY CLAIM:	1	
NUMBER OF DRAWINGS:	26 Drawing Page(s)	
LINE COUNT:	2689	
CAS INDEXING IS AVAILABLE FOR THIS PATENT.		

L5 ANSWER 7 OF 11 USPATFULL on STN

TI Mutant chromophores/fluorophores and methods for making and using the same

AB Nucleic acid compositions encoding mutants of wild-type chromo/fluoroproteins whose chromo/fluorescent properties have been interconverted, as well as the proteins encoded the same, are provided. Also provided are methods for interconverting chromoproteins to fluorescent proteins, and vice versa. Also of interest are proteins that are substantially similar to, or mutants of, the above specific proteins. Also provided are fragments of the nucleic acids and the peptides encoded thereby, as well as antibodies to the subject proteins and transgenic cells and organisms. The subject protein and nucleic acid compositions find use in a variety of different applications. Finally, kits for use in such applications, e.g., that include the subject nucleic acid compositions, are provided.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

ACCESSION NUMBER: 2004:314508 USPATFULL  
TITLE: Mutant chromophores/fluorophores and methods for making and using the same  
INVENTOR(S): Bulina, Maria E., Moscow, RUSSIAN FEDERATION  
Chudakov, Dmitry, Moscow, RUSSIAN FEDERATION  
Lukyanov, Konstantin A., Moscow, RUSSIAN FEDERATION

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 2004248180	A1	20041209
APPLICATION INFO.:	US 2004-845484	A1	20040512 (10)
RELATED APPLN. INFO.:	Continuation-in-part of Ser. No. WO 2002-US41418, filed on 23 Dec 2002, PENDING		

	NUMBER	DATE
PRIORITY INFORMATION:	US 2001-343128P	20011226 (60)
DOCUMENT TYPE:	Utility	
FILE SEGMENT:	APPLICATION	
LEGAL REPRESENTATIVE:	BOZICEVIC, FIELD & FRANCIS (BD BIOSCIENCES), 1900 UNIVERSITY AVENUE, SUITE 200, EAST PALO ALTO, CA, 94303	
NUMBER OF CLAIMS:	26	
EXEMPLARY CLAIM:	1	
NUMBER OF DRAWINGS:	3 Drawing Page(s)	

LINE COUNT: 2020  
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L5 ANSWER 8 OF 11 USPATFULL on STN  
TI Nucleic acids encoding linked chromo/fluorescent domains and  
methods for using the same  
AB Nucleic acid compositions encoding polypeptide products having at least  
two linked chromo/fluorescent domains, as well as the proteins  
encoded by the same, are provided. Also provided are the polypeptides  
encoded by the subject nucleic acids, as well as antibodies to the  
subject proteins and transgenic cells and organisms. The subject protein  
and nucleic acid compositions find use in a variety of different  
applications. Finally, kits for use in such applications, e.g., that  
include the subject nucleic acid compositions, are provided.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

ACCESSION NUMBER: 2004:275675 USPATFULL  
TITLE: Nucleic acids encoding linked chromo/  
fluorescent domains and methods for using the  
same  
INVENTOR(S): Lukyanov, Sergey Anatolievich, Moscow, RUSSIAN  
FEDERATION  
PATENT ASSIGNEE(S): Clontech Laboratories, Inc. (non-U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 2004216180	A1	20041028
APPLICATION INFO.:	US 2004-806930	A1	20040322 (10)
RELATED APPLN. INFO.:	Continuation-in-part of Ser. No. WO 2002-US32560, filed on 10 Oct 2002, PENDING Continuation-in-part of Ser. No. US 2001-976673, filed on 12 Oct 2001, PENDING		

	NUMBER	DATE
PRIORITY INFORMATION:	US 2002-356225P	20020211 (60)
	US 2002-383336P	20020522 (60)
DOCUMENT TYPE:	Utility	
FILE SEGMENT:	APPLICATION	
LEGAL REPRESENTATIVE:	BOZICEVIC, FIELD & FRANCIS (BD BIOSCIENCES), 200 MIDDLEFIELD ROAD, SUITE 200, MENLO PARK, CA, 94025	
NUMBER OF CLAIMS:	17	
EXEMPLARY CLAIM:	1	
NUMBER OF DRAWINGS:	12 Drawing Page(s)	
LINE COUNT:	2197	

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L5 ANSWER 9 OF 11 USPATFULL on STN  
TI Kindling fluorescent proteins and methods for their use  
AB Kindling fluorescent protein compositions and nucleic acids  
encoding the same, as well as methods for using the same, are provided.  
The kindling fluorescent proteins are characterized in that  
they become brightly fluorescent proteins, from an initial  
non-fluorescent or low fluorescent state, upon  
exposure to a kindling stimulus, which fluorescent state may  
be reversible or irreversible. The subject protein/nucleic acid  
compositions find use in labeling protocols, e.g., in labeling proteins,  
organelles, cells and organisms, etc., in a variety of different types  
of applications. Also provided are systems and kits for use in  
practicing such applications.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

ACCESSION NUMBER: 2003:134795 USPATFULL  
TITLE: Kindling fluorescent proteins and methods for

their use  
INVENTOR(S): Lukyanov, Sergey A., Moscow, RUSSIAN FEDERATION  
Lukyanov, Konstantin, Moscow, RUSSIAN FEDERATION  
Chudakov, Dmitry, Moscow, RUSSIAN FEDERATION

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 2003092884	A1	20030515
APPLICATION INFO.:	US 2002-155809	A1	20020524 (10)

	NUMBER	DATE
PRIORITY INFORMATION:	US 2001-293752P	20010525 (60)
	US 2001-329176P	20011011 (60)
DOCUMENT TYPE:	Utility	
FILE SEGMENT:	APPLICATION	
LEGAL REPRESENTATIVE:	BOZICEVIC, FIELD & FRANCIS LLP, 200 MIDDLEFIELD RD, SUITE 200, MENLO PARK, CA, 94025	
NUMBER OF CLAIMS:	43	
EXEMPLARY CLAIM:	1	
NUMBER OF DRAWINGS:	10 Drawing Page(s)	
LINE COUNT:	3222	
CAS INDEXING IS AVAILABLE FOR THIS PATENT.		

L5 ANSWER 10 OF 11 USPATFULL on STN

TI Non aggregating fluorescent proteins and methods for using the  
same

AB Nucleic acid compositions encoding non-aggregating chromo/fluoroproteins and mutants thereof, as well as the proteins encoded by the same, are provided. The proteins of interest are polypeptides that are non-aggregating colored and/or fluorescent proteins, where the the non-aggregating feature arises from the modulation of residues in the N-terminus of the protein and the chromo and/or fluorescent feature arises from the interaction of two or more residues of the protein. Also provided are fragments of the subject nucleic acids and the peptides encoded thereby, as well as antibodies to the subject proteins and transgenic cells and organisms. The subject protein and nucleic acid compositions find use in a variety of different applications. Finally, kits for use in such applications, e.g., that include the subject nucleic acid compositions, are provided.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

ACCESSION NUMBER: 2003:30340 USPATFULL

TITLE: Non aggregating fluorescent proteins and  
methods for using the same

INVENTOR(S): Lukyanov, Sergey, Moscow, RUSSIAN FEDERATION  
Lukyanov, Konstantin, Moscow, RUSSIAN FEDERATION  
Yanushevich, Yuriy, Moscow, RUSSIAN FEDERATION  
Savitsky, Alexandr, Moscow, RUSSIAN FEDERATION  
Fradkov, Arcady, Moscow, RUSSIAN FEDERATION

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 2003022287	A1	20030130
	US 6969597	B2	20051129
APPLICATION INFO.:	US 2002-81864	A1	20020220 (10)
RELATED APPLN. INFO.:	Continuation-in-part of Ser. No. US 2001-6922, filed on 4 Dec 2001, PENDING		

	NUMBER	DATE
PRIORITY INFORMATION:	US 2001-270983P	20010221 (60)
DOCUMENT TYPE:	Utility	

FILE SEGMENT: APPLICATION  
 LEGAL REPRESENTATIVE: BOZICEVIC, FIELD & FRANCIS LLP, 200 MIDDLEFIELD RD,  
 SUITE 200, MENLO PARK, CA, 94025  
 NUMBER OF CLAIMS: 20  
 EXEMPLARY CLAIM: 1  
 NUMBER OF DRAWINGS: 15 Drawing Page(s)  
 LINE COUNT: 2207  
 CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L5 ANSWER 11 OF 11 USPATFULL on STN

TI Novel chromophores/fluorophores and methods for using the same  
 AB Nucleic acid compositions encoding novel chromo/fluoroproteins and  
 mutants thereof, as well as the proteins encoded by the same, are  
 provided. The subject proteins of interest are proteins that are colored  
 and/or fluorescent, where this feature arises from the  
 interaction of two or more residues of the protein. The subject proteins  
 are further characterized in that they are either obtained from  
 non-bioluminescent Cnidarian, e.g., Anthozoan, species or are obtained  
 from non-Pennatulacean (sea pen) species. Specific proteins of interest  
 include proteins obtained from the following specific Anthozoan species:  
 Anemonia majano (NFP-1), Clavularia sp. (NFP-2), Zoanthus sp. (NFP-3 &  
 NFP-4), Discosoma striata (NFP-5), Discosoma sp. "red" (NFP-6), Anemonia  
 sulcata (NFP-7), Discosoma sp "green" (NFP-8), and Discosoma sp.  
 "magenta" (NFP-9). Also of interest are proteins that are substantially  
 similar to, or mutants of, the above specific proteins. Also provided  
 are fragments of the nucleic acids and the peptides encoded thereby, as  
 well as antibodies to the subject proteins and transgenic cells and  
 organisms. The subject protein and nucleic acid compositions find use in  
 a variety of different applications. Finally, kits for use in such  
 applications, e.g., that include the subject nucleic acid compositions,  
 are provided.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

ACCESSION NUMBER: 2002:343950 USPATFULL  
 TITLE: Novel chromophores/fluorophores and methods for using  
 the same  
 INVENTOR(S): Lukyanov, Sergey A., Moscow, RUSSIAN FEDERATION  
 Fradkov, Arcady F., Moscow, RUSSIAN FEDERATION  
 Labas, Yulii A., Moscow, RUSSIAN FEDERATION  
 Matz, Mikhail V., Palm Cost, RUSSIAN FEDERATION  
 Terskikh, Alexey, Palo Alto, CA, UNITED STATES

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 2002197676	A1	20021226
APPLICATION INFO.:	US 2001-6922	A1	20011204 (10)
RELATED APPLN. INFO.:	Continuation-in-part of Ser. No. WO 2000-US28477, filed on 13 Oct 2000, UNKNOWN Continuation-in-part of Ser. No. US 1999-418529, filed on 14 Oct 1999, PENDING Continuation-in-part of Ser. No. US 1999-418917, filed on 15 Oct 1999, ABANDONED Continuation-in-part of Ser. No. US 1999-418922, filed on 15 Oct 1999, ABANDONED Continuation-in-part of Ser. No. US 1999-444338, filed on 19 Nov 1999, ABANDONED Continuation-in-part of Ser. No. US 1999-444341, filed on 19 Nov 1999, ABANDONED Continuation-in-part of Ser. No. US 1999-457556, filed on 9 Dec 1999, ABANDONED Continuation-in-part of Ser. No. US 1999-458477, filed on 9 Dec 1999, ABANDONED Continuation-in-part of Ser. No. US 1999-458144, filed on 9 Dec 1999, ABANDONED Continuation-in-part of Ser. No. US 1999-457898, filed on 9 Dec 1999, ABANDONED		

NUMBER DATE



PRIORITY INFORMATION: -----  
 WO 1999-US29405 19991210  
 US 2000-211627P 20000614 (60)  
 US 2000-211687P 20000614 (60)  
 US 2000-211609P 20000614 (60)  
 US 2000-211626P 20000614 (60)  
 US 2000-211880P 20000614 (60)  
 US 2000-211607P 20000614 (60)  
 US 2000-211766P 20000614 (60)  
 US 2000-211888P 20000614 (60)  
 US 2000-212070P 20000614 (60)  
 DOCUMENT TYPE: Utility  
 FILE SEGMENT: APPLICATION  
 LEGAL REPRESENTATIVE: BOZICEVIC, FIELD & FRANCIS LLP, 200 MIDDLEFIELD RD,  
 SUITE 200, MENLO PARK, CA, 94025  
 NUMBER OF CLAIMS: 31  
 EXEMPLARY CLAIM: 1  
 NUMBER OF DRAWINGS: 19 Drawing Page(s)  
 LINE COUNT: 2795  
 CAS INDEXING IS AVAILABLE FOR THIS PATENT.

=> d his

(FILE 'HOME' ENTERED AT 16:49:07 ON 28 JUL 2006)

FILE 'MEDLINE, BIOSIS, WPIDS, HCAPLUS, USPATFULL' ENTERED AT 16:49:42 ON  
 28 JUL 2006

L1 80 S CNIDARIAN SPECIES  
 L2 8 S ANTHOZOAN AND NON-PENNATULACEAN  
 L3 5 S L1 AND L2  
 L4 11 S L1 AND (VARIANTS OR MUTATION)  
 L5 11 S L4 AND FLUORESCENT

=> s (nucleic acid and encode chromo-fluorescent protein)

# Refine Search

## Search Results -

Terms	Documents
L1 and (Cnidarian and Anthozoan)	7

Database:

US Pre-Grant Publication Full-Text Database

US Patents Full-Text Database

US OCR Full-Text Database

EPO Abstracts Database

JPO Abstracts Database

Derwent World Patents Index

IBM Technical Disclosure Bulletins

Search:

L2

Refine Search

Recall Text

Clear

Interrupt

## Search History

DATE: Friday, July 28, 2006   [Printable Copy](#)   [Create Case](#)

### Set Name Query

side by side

### Hit Count Set Name

result set

*DB=PGPB; PLUR=YES; OP=OR*

L2   L1 and (Cnidarian and Anthozoan)   7   L2

L1   lukyanov.in.   11   L1

END OF SEARCH HISTORY

GenCore version 5.1.9  
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OM protein - protein search, using sw model

Run on: July 28, 2006, 12:42:38 ; Search time 0.001 Seconds  
(without alignments)  
259.650 Million cell updates/sec

Title: US-10-006-922A-12-COPY  
Perfect score: 1214  
Sequence: 1 MRSSKNVIKEFMRFKVRMEG.....EDYTIVEQYERTEGRHHLFL 225

Scoring table: BLOSUM62  
Gapop 10.0 , Gapext 0.5

Searched: 5 seqs, 1154 residues

Total number of hits satisfying chosen parameters: 5

Minimum DB seq length: 0  
Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%  
Maximum Match 100%  
Listing first 45 summaries

Database : new.pep:\*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	% Query		DB	ID	Description
		Match	Length			
1	559.5	46.1	232	1	US-10-006-922A-42-COPY	Sequence 42, Appl
2	556.5	45.8	232	1	US-10-006-922A-14-COPY	Sequence 14, Appl
3	494	40.7	229	1	US-10-006-922A-28-COPY	Sequence 28, Appl
4	478.5	39.4	231	1	US-10-006-922A-6-COPY	Sequence 6, Appli
5	475	39.1	230	1	US-10-006-922A-8-COPY	Sequence 8, Appli

ALIGNMENTS

RESULT 1

US-10-006-922A-42-COPY  
; Sequence 42, Application US/10006922A  
; GENERAL INFORMATION:  
; APPLICANT: Lukyanov, Sergey A  
; APPLICANT: Fradkov, Arcady F.  
; APPLICANT: Labas, Yulii A.

```
; APPLICANT: Matz, Mikhail V.
; APPLICANT: Terskikh, Alexey
; TITLE OF INVENTION: Novel Chromophores/Fluorophores and
; TITLE OF INVENTION: Methods for Using the Same
; FILE REFERENCE: CLON-035CIP
; CURRENT APPLICATION NUMBER: US/10/006,922A
; CURRENT FILING DATE: 2002-05-07
; PRIOR APPLICATION NUMBER: 09/120,330
; PRIOR FILING DATE: 1998-12-11
; PRIOR APPLICATION NUMBER: 09/457,898
; PRIOR FILING DATE: 1999-12-09
; PRIOR APPLICATION NUMBER: 09/458,144
; PRIOR FILING DATE: 1999-12-09
; PRIOR APPLICATION NUMBER: 09/458,477
; PRIOR FILING DATE: 1999-12-09
; PRIOR APPLICATION NUMBER: 09/457,556
; PRIOR FILING DATE: 1999-12-09
; PRIOR APPLICATION NUMBER: 09/444,338
; PRIOR FILING DATE: 1999-11-19
; NUMBER OF SEQ ID NOS: 46
; SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 42
; LENGTH: 232
; TYPE: PRT
; ORGANISM: Anemonia sulcata
US-10-006-922A-42-COPY
```

```
Query Match          46.1%; Score 559.5; DB 1; Length 232;
Best Local Similarity 48.4%; Pred. No. 0;
Matches 105; Conservative 37; Mismatches 72; Indels 3; Gaps 1;
```

```
Qy      8 IKEFMRFKVRMEGTVNGHEFEIEGEGEGRPYEGHNTVKLKVTKGGPLPFAWDILSPQFQY 67
      :|: | || :|||||| | : |:|| |:|| :|:| :|||||||: ||| |
Db      5 LKKTMPFKTTIEGTVNGHYFKCTGKGEGNPFEGTQEMKIEVIEGGPLPFAFHILSTSCMY 64

Qy     68 GSKVYVKHPADIPDYKKLSFPEGFKWERVMNFEDGGVVTVTQDSSLQDGCIFYKVKFIGV 127
      ||| :|: : |||| | ||||| ||| :|||| :| ||:| | :|||| :|
Db     65 GSKAFIKYVSGIPDYFKQSFPEGFTWERTTTTYEDGGFLTAHQDTSLDGDCLVYKVILGN 124

Qy    128 NFPSDGPMQKKTMGWEASTERLYPRDGV LKGEIHKALKLKDGGHYLVEFKSIYMAKKP- 186
      |||:||||| | || ||| :| ||||:|: ||| | | :| :|||
Db    125 NFPADGPMQNKAGRWEPESTEIVYEVDGVLRGQSLMALKCPGGRHLTCHLHTTYRSKKPA 184

Qy    187 --VQLPGYYYVDSKLDITSHNEDYTIVEQYERTEGRH 221
      ::||::| :::| | :||| ||:
Db    185 SALKMPGFHFEDHRIEIMEEVEKGKCYKQYEAAVGRY 221
```

## RESULT 2

```
US-10-006-922A-14-COPY
; Sequence 14, Application US/10006922A
; GENERAL INFORMATION:
; APPLICANT: Lukyanov, Sergey A
; APPLICANT: Fradkov, Arcady F.
; APPLICANT: Labas, Yulii A.
; APPLICANT: Matz, Mikhail V.
; APPLICANT: Terskikh, Alexey
```

```

; TITLE OF INVENTION: Novel Chromophores/Fluorophores and
; TITLE OF INVENTION: Methods for Using the Same
; FILE REFERENCE: CLON-035CIP
; CURRENT APPLICATION NUMBER: US/10/006,922A
; CURRENT FILING DATE: 2002-05-07
; PRIOR APPLICATION NUMBER: 09/120,330
; PRIOR FILING DATE: 1998-12-11
; PRIOR APPLICATION NUMBER: 09/457,898
; PRIOR FILING DATE: 1999-12-09
; PRIOR APPLICATION NUMBER: 09/458,144
; PRIOR FILING DATE: 1999-12-09
; PRIOR APPLICATION NUMBER: 09/458,477
; PRIOR FILING DATE: 1999-12-09
; PRIOR APPLICATION NUMBER: 09/457,556
; PRIOR FILING DATE: 1999-12-09
; PRIOR APPLICATION NUMBER: 09/444,338
; PRIOR FILING DATE: 1999-11-19
; NUMBER OF SEQ ID NOS: 46
; SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 14
; LENGTH: 232
; TYPE: PRT
; ORGANISM: Anemonia sulcata
US-10-006-922A-14-COPY

```

```

Query Match          45.8%; Score 556.5; DB 1; Length 232;
Best Local Similarity 47.9%; Pred. No. 0;
Matches 104; Conservative 38; Mismatches 72; Indels 3; Gaps 1;

```

```

Qy      8 IKEFMRFKVRMEGTVNGHEFEIEGEGEGRPYEGHNTVCLKVTKGGPLPFAWDILSPQFQY 67
      :|:| | || :||| ||| | :|:| | |:| :|:| :||| ||| :| |
Db      5 LKKTMPFKTTIEGTVNGHYFKCTGKGEGNPFEGTQEMKIEVIEGGPLPFAFHILSTSCMY 64

Qy     68 GSKVYVKHPADIPDYKKLSFPEGFKWERVMNFEDGGVVTVTQDSSLQDGCFIYKVKFIGV 127
      ||| :|:| : ||| | ||| ||| || :||| :| ||:| | :||| :|
Db     65 GSKTFIKYVSGIPDYFKQSFPEGFTWERTTTTYEDGGFLTAHQDTSLDGDCLVYKVKILGN 124

Qy    128 NFPSDGPVQMCKKTMGWEASTERLYPRDGVCLKGEIHKALKLKDGGHYLVFEKSIYMAKKP- 186
      |||:||||| | || :|| :| |||:|: ||| | | :|:| |
Db    125 NFPADGPVMQNKAGRWEPA TEIVYEVDGVLRGQSLMALKCPGGRHLTCHLHTTYRSKKPA 184

Qy    187 --VQLPGYYYVDSKLDITSHNEDYTIVEQYERTEGRH 221
      :|||:|:| | :||| | :||| ||:
Db    185 AALKMPGFHFEDHRIEIMEEVEKGKCYKQYEA AVGRY 221

```

# RESULT 3

US-10-006-922A-28-COPY

```

; Sequence 28, Application US/10006922A
; GENERAL INFORMATION:
; APPLICANT: Lukyanov, Sergey A
; APPLICANT: Fradkov, Arcady F.
; APPLICANT: Labas, Yulii A.
; APPLICANT: Matz, Mikhail V.
; APPLICANT: Terskikh, Alexey
; TITLE OF INVENTION: Novel Chromophores/Fluorophores and
; TITLE OF INVENTION: Methods for Using the Same

```

```

; FILE REFERENCE: CLON-035CIP
; CURRENT APPLICATION NUMBER: US/10/006,922A
; CURRENT FILING DATE: 2002-05-07
; PRIOR APPLICATION NUMBER: 09/120,330
; PRIOR FILING DATE: 1998-12-11
; PRIOR APPLICATION NUMBER: 09/457,898
; PRIOR FILING DATE: 1999-12-09
; PRIOR APPLICATION NUMBER: 09/458,144
; PRIOR FILING DATE: 1999-12-09
; PRIOR APPLICATION NUMBER: 09/458,477
; PRIOR FILING DATE: 1999-12-09
; PRIOR APPLICATION NUMBER: 09/457,556
; PRIOR FILING DATE: 1999-12-09
; PRIOR APPLICATION NUMBER: 09/444,338
; PRIOR FILING DATE: 1999-11-19
; NUMBER OF SEQ ID NOS: 46
; SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 28
; LENGTH: 229
; TYPE: PRT
; ORGANISM: Anemonia majano
US-10-006-922A-28-COPY

```

```

Query Match          40.7%; Score 494; DB 1; Length 229;
Best Local Similarity 45.8%; Pred. No. 0;
Matches 92; Conservative 37; Mismatches 70; Indels 2; Gaps 1;

```

```

Qy      1 MRSSKNVIKEFMRFKVRMEGTVNGHEFEIEGEGEGRPYEGHNTVCLKVT--KGGPLPFAW 58
      | | | : | : | : | | | | : | | | | : | | | | | | | : :
Db      1 MALSNEFIGDDMKMTYHMDGCVNGHYFTVKGEGSGKPYEGTQTSTFKVTMANGGPLAFSF 60

Qy     59 DILSPQFQYGSKVYVKHPADIPDYKKLSFPEGFKWERVMNFEDGGVVTVTQDSSLQDGC 118
      | | | | | : | : : : | : | | | : | | : | | | | : : | : |
Db     61 DILSTVFMYGNRCFTAYPTSMPPDYFKQAFPDGMSYERTFTYEDGGVATASWEISLKG 120
      | | | | | : | : : : | : | | | : | | : | | | | : : | : |

Qy    119 IYKVKFIGVNFPSDGPVQMCKTMGWEASTERLYPRDGVCLKGEIHKALKLKDGGHYLVEFK 178
      : | | | | | : | | | | | | | | : | : | : | : | : | : | : |
Db    121 EHKSTFHGVNFPADGPMMAKKTGTGWDPSFEKMTVCDGILKGDVTAFLMLQGGGNRYCQFH 180
      : | | | | : | : | : : : | : | : | : | : | : | : |

Qy    179 SIYMAKKPVQLPGYYYYVDSKL 199
      : | | | | : | : | : :
Db    181 TSYKTKKPVTMPNHHVVEHRI 201

```

#### RESULT 4

```

US-10-006-922A-6-COPY
; Sequence 6, Application US/10006922A
; GENERAL INFORMATION:
; APPLICANT: Lukyanov, Sergey A
; APPLICANT: Fradkov, Arcady F.
; APPLICANT: Labas, Yulii A.
; APPLICANT: Matz, Mikhail V.
; APPLICANT: Terskikh, Alexey
; TITLE OF INVENTION: Novel Chromophores/Fluorophores and
; TITLE OF INVENTION: Methods for Using the Same
; FILE REFERENCE: CLON-035CIP
; CURRENT APPLICATION NUMBER: US/10/006,922A

```

```

; CURRENT FILING DATE: 2002-05-07
; PRIOR APPLICATION NUMBER: 09/120,330
; PRIOR FILING DATE: 1998-12-11
; PRIOR APPLICATION NUMBER: 09/457,898
; PRIOR FILING DATE: 1999-12-09
; PRIOR APPLICATION NUMBER: 09/458,144
; PRIOR FILING DATE: 1999-12-09
; PRIOR APPLICATION NUMBER: 09/458,477
; PRIOR FILING DATE: 1999-12-09
; PRIOR APPLICATION NUMBER: 09/457,556
; PRIOR FILING DATE: 1999-12-09
; PRIOR APPLICATION NUMBER: 09/444,338
; PRIOR FILING DATE: 1999-11-19
; NUMBER OF SEQ ID NOS: 46
; SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 6
; LENGTH: 231
; TYPE: PRT
; ORGANISM: Zoanthus species
US-10-006-922A-6-COPY

```

```

Query Match          39.4%; Score 478.5; DB 1; Length 231;
Best Local Similarity 45.6%; Pred. No. 0;
Matches 93; Conservative 38; Mismatches 68; Indels 5; Gaps 3;

```

```

Qy      1 MRSSKNVIKEFMRFKVRMEGTVNGHEFEIEGEGEGRPYEGHNTVKLKVTKGGLPFAWDI 60
      | ||: : : | | |||| |:|:| | ||| | |:| : | | :||| || ||
Db      1 MAQSKHGLTKEMTMKYRMEGCDGHKFVITGEGIGYPFKGKQAINLCVVEGGPLPFAEDI 60

Qy     61 LSPQFQYGSKVYVKHPADIPDYKKLSFPEGFKWERVMNFEDGGVVTVTQD--SSLQDGC 118
      || | ||::: : : || || | | | | : : | |||| | | | : : : |
Db     61 LSAAFNYGNRVFTEYPQDIADYFKNSCPAGYTWDERSFLFEDGAVCICNADITVSVEENCM 120

Qy    119 IYKVKFIGVNFPSDGPVMQKKTMGWEASTERL--YPRDGVLKGEIHKALKLKDGGHYLVE 176
      : : || |||||:| ||||:| | || | |:| : : |||: : | |||| | :
Db    121 YHESKFYGVNFPADGPVMKKMTDNWEPSCEKIIPVPKQGILKGDVSMYLLLLKDGGRRLRCQ 180

Qy    177 FKSIYMAKK-PVQLPGYYYVDSKL 199
      | :| || | :| : : : ||
Db    181 FDTVYKAKSVPRKMPDWHFIQHKL 204

```

# RESULT 5

```

US-10-006-922A-8-COPY
; Sequence 8, Application US/10006922A
; GENERAL INFORMATION:
; APPLICANT: Lukyanov, Sergey A
; APPLICANT: Fradkov, Arcady F.
; APPLICANT: Labas, Yulii A.
; APPLICANT: Matz, Mikhail V.
; APPLICANT: Terskikh, Alexey
; TITLE OF INVENTION: Novel Chromophores/Fluorophores and
; TITLE OF INVENTION: Methods for Using the Same
; FILE REFERENCE: CLON-035CIP
; CURRENT APPLICATION NUMBER: US/10/006,922A
; CURRENT FILING DATE: 2002-05-07
; PRIOR APPLICATION NUMBER: 09/120,330

```

```
; PRIOR FILING DATE: 1998-12-11
; PRIOR APPLICATION NUMBER: 09/457,898
; PRIOR FILING DATE: 1999-12-09
; PRIOR APPLICATION NUMBER: 09/458,144
; PRIOR FILING DATE: 1999-12-09
; PRIOR APPLICATION NUMBER: 09/458,477
; PRIOR FILING DATE: 1999-12-09
; PRIOR APPLICATION NUMBER: 09/457,556
; PRIOR FILING DATE: 1999-12-09
; PRIOR APPLICATION NUMBER: 09/444,338
; PRIOR FILING DATE: 1999-11-19
; NUMBER OF SEQ ID NOS: 46
; SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 8
; LENGTH: 230
; TYPE: PRT
; ORGANISM: Zoanthus species
US-10-006-922A-8-COPY
```

```
Query Match          39.1%; Score 475; DB 1; Length 230;
Best Local Similarity 46.1%; Pred. No. 0;
Matches 94; Conservative 38; Mismatches 66; Indels 6; Gaps 4;
```

```
Qy      1 MRSSKNVIKEFMRFKVRMEGTVNGHEFEIEGEGEGRPYEGHNTVKLKVTKGGPLPFAWDI 60
      |  ||: :|| | | ||| ||||:| | ||| | :|| | :| |||||: ||
Db      1 MAHSKHGLKEEMTMKYHMEGCVNGHKFVITGEGIGYPFKGKQTINLCVIEGGPLPFSEDI 60

Qy     61 LSPQFQYGSKVYVKHPADI PDYKKLSFPEGFKWERVMNFEDGGVVTVTQD--SSLQDGCF 118
      || | :|| ::| :|| || | | | :| | : |||| | | | :||: |
Db     61 LSAGFKYGDRIFTEYPQDIVDYFKNSCPAGYTWGSFL-FEDGAVCICNVDITVSVKENCI 119

Qy    119 IYKVKFIGVNFPSDGPVMQKKTMGWEASTERL--YPRDGVLKGEIHKALKLKDGGHYLVE 176
      :| | | :|||:|||||:| | |||| |:: | : | :|||:: | ||||| | :
Db    120 YHKSIFNGMNF PADGPVMKKMTTNWEASCEKIMPVVKQGILKGDVSMYLLLLKDGGRYRCQ 179

Qy    177 FKSIYMAKK-PVQLPGYYYVDSKL 199
      | :| || | :| :||: ||
Db    180 FDTVYKAKSVPSKMPewHFIQHKL 203
```

```
Search completed: July 28, 2006, 12:42:38
Job time : 0.001 secs
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